

## **REMARKS**

### **A. The Status of the Claims and the Amendments**

By the present amendment, claims 1-4, 6-10, 13-15, 20, 23-25, 41, 42, 44, and 45 have been amended to claim the invention with greater particularity and specificity. Claims 39, 40, and 43 have been canceled without prejudice and claims 5, 21, and 22 were previously canceled. The restriction requirement having been made final, which is acknowledged, claims 11, 12, 16-18, 26, 27, and 29-38 have been withdrawn from consideration as directed to non-elected species.

New claims 46-53 have been added. No new matter have been introduced in the amendments to the pending claims or with the new claims. More specifically, the recitation of a matrix containing a gas or a gas precursor is disclosed throughout the specification, as originally filed, e.g., is disclosed in paragraphs [0157], [0158], and [0162] on page 20 of the published version of the instant application (i.e., published on May 13, 2004 as US2004/0091541). The use of a gas precursor in addition to, or in lieu of, a gas is also disclosed in paragraph [0102] on page 11 of the published application.

Furthermore, the recitation of "a perfluorocarbon, a perfluoroether, and sulfur hexafluoride" added to claim 1 is disclosed in paragraph [0167] on page 21 of the published application. The recitation of various gases in new claim 46 is disclosed in paragraph [0166] on page 21 of the published application. The matter recited in claims 47-53 is disclosed in paragraphs [0167] and [0169] on pages 21-22 of the published application.

Accordingly, entry of the amendment is respectfully requested. Upon entry of this amendment, claims 1-4, 6-10, 13-15, 19, 20, 23-25, 28, 41, 42, and 44-53 will be under consideration.

**B. Rejection Under 35 U.S.C. § 112, Second Paragraph**

Claims 2-4 and 6 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for allegedly failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention (page 3, fourth paragraph, of the Office Action). The rejection is respectfully traversed on the following grounds.

The Applicant has amended claim 2, which now recites only “dried state.” Claims 3, 4, and 6 add further limitations, such as a composition being “rehydrated with an aqueous solution” (claim 3). Claims 4 and 6 depending on claim 3 are thus clarified for self-evident reasons.

In view of the amendment, it is submitted that the 35 U.S.C. § 112, second paragraph, rejection no longer applies. Reconsideration and withdrawal of the rejection of claims 2-4 and 6 for indefiniteness are respectfully requested.

**C. Rejections Under 35 U.S.C. § 102(b)**

Claims 1-4, 6-9, 13-15, 19, 20, 23-25, and 39-45 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Patent No. 5,469,854 to Unger et al. (“Unger”) (see, page 3, last paragraph of the Office Action). In addition, claims 1-4, 6-9, 19, 20, 28, and 39-45 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Patent No. 4,818,542 to DeLuca et al. (“DeLuca”) (see, page 5, first paragraph of the Office Action). These rejections are respectfully traversed.

It is axiomatic that a valid rejection of a claim for anticipation by a reference requires that the reference explicitly or inherently describe all of the elements, limitations, and relationships recited in the claim. In addition, a valid 102(b) reference must have the publication date that is more than 1 year prior to the earliest priority date of

claims in question. It is submitted that neither Unger nor DeLuca describes all the elements and limitations recited in claim 1, as amended.

In particular, claim 1, as amended, now recites matrices entrapping a gas and/or a gas precursor "selected from a group consisting of a perfluorocarbon, a perfluoroether, sulfur hexafluoride, and combinations thereof." Unger fails to describe or suggest using any of such gases. Unger describes liposomes containing such gases as air, nitrogen, carbon dioxide, oxygen, argon, fluorine, xenon, neon, or helium (see, col. 16, lines 9-11). Use of no other gases is taught or suggested by Unger.

Similarly, DeLuca fails to describe or suggest using any gas recited in claim 1, as amended. DeLuca describes spherical microporous polymers and does not teach any specific gas at all. The Examiner has remarked that the presence of atmospheric gases within the microspheres described by DeLuca is "inherent" (page 5, last four lines, of the Office Action). However, the "atmospheric gases" are clearly limited to oxygen, nitrogen, carbon dioxide, and some noble gases. Those skilled in the art will undoubtedly understand that the term "atmospheric gases" does not encompass a perfluorocarbon, a perfluoroether, or sulfur hexafluoride recited in claim 1, as amended.

In view of the foregoing it is submitted that claim 1 is patentably distinguishable over both Unger and DeLuca. Each of other claims depends, directly or indirectly on claim 1, and is considered patentable for at least the same reason. Claims 39, 40, and 43 have been canceled. Therefore, reconsideration and withdrawal of the rejection of claims 1-4, 6-9, 13-15, 19, 20, 23-25, 28, 41, 42, 44, and 45 under 35 U.S.C. § 102(b) are respectfully requested.

**D. Rejections Under 35 U.S.C. § 103(a)**

Claims 1-4, 6-10, 13-15, 19, 20, 23-25, 28 and 39-45 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Unger (page 6, third paragraph of the Office Action), and, additionally, as allegedly being unpatentable over DeLuca in

view of U.S. Patent No. 5,330,756 to Steuart et al. ("Steuart") and in view of Unger (page 6, sixth paragraph of the Office Action). These rejections are respectfully traversed.

To establish a *prima facie* case of obviousness over a combination of references, the following three basic criteria must be met: (1) there must be some suggestion or motivation to combine the references as proposed by the Examiner; (2) there must be a reasonable expectation of success as a result of such combination; and (3) when all the references are combined, the combination must teach or suggest all of the claim limitations. The Applicants respectfully submits that at least some of these criteria have not been satisfied in this case, particularly since the above-mentioned combination of references fails to teach or suggest every limitation of claim 1.

Unger fails to teach or suggest certain above-discussed limitations of claim 1, i.e., fails to disclose or to suggest using a matrix that comprises a perfluorocarbon, a perfluoroether, sulfur hexafluoride, and combinations thereof, as discussed above. It is submitted that the teachings of Unger provide no motivation to a person having ordinary skill in the art to include any of such gases into the matrix.

The only fluorinated gas that is mentioned by Unger is fluorine gas itself (i.e. F<sub>2</sub>), and there is no basis in the disclosure of Unger that provides any suggestion of using any other fluorinated gases, particularly in view of the fact that the gases preferred by Unger are clearly fluorine and nitrogen.

Turning now to the second rejection on the obviousness grounds, DeLuca describes what is discussed above. While DeLuca may be relevant to the original claim 10, it is not germane to claim 1, as amended. Indeed, as discussed above, DeLuca fails to discuss any gas. By combining DeLuca, Steuart and Unger, the Examiner can construct a disclosure of a composition having spherical polymeric microspheres (i.e., from DeLuca), incorporating taxol (from Steuart) and PEG-400 (from Unger).

Such combined disclosure lacks the presence of a gas or a precursor recited in claim 1. It is submitted that Unger does not provide any suggestion or motivation to modify such a composition to include one of the gases recited in claim 1, as explained above. Nor can such motivation be had from Steuart which is only concerned with using taxol in matrices and not with using any gas.

In view of the foregoing it is submitted that claim 1 is patentably distinguishable over Unger and over a combination of DeLuca, Steuart and Unger. Each of other claims depends, directly or indirectly on claim 1, and is considered patentable for at least the same reason. Claims 39, 40, and 43 have been canceled. Accordingly, it is submitted that the rejections of claims 1-4, 6-10, 13-15, 19, 20, 23-25, 28 and 41, 42, 44, and 45 over Unger and/or over DeLuca, Steuart and Unger, under 35 U.S.C. § 103(a) do not apply. Reconsideration and withdrawal of the rejection are respectfully requested.

**E. New Claims 46-53**

New claims 46-53 have been added. As stated before, these claims do not recite any new matter. These claims are also novel and non-obvious. Indeed, claim 46 recites a number of species of gases or precursors that are present in the porous matrix. It is submitted that none of these gases is disclosed or fairly suggested in the cited references. Accordingly, claim 46 is considered patentable.

With regard to claims 47-53, each of these claims depends, directly or indirectly on claim 1, and is considered patentable for at least the same reasons that claim 1 is patentable.

In re Application of:  
Evan C. Unger  
Application No.: 10/622,027  
Filed: July 16, 2003  
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PATENT  
Attorney Docket No.: IMARX1360-2

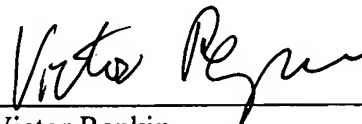
**CONCLUSION**

In view of the above amendments and remarks, reconsideration and favorable action on all claims are respectfully requested. In the event any matters remain to be resolved, the Examiner is requested to contact the undersigned at the telephone number given below so that a prompt disposition of this application can be achieved.

No fee is believed to be due in connection with filing this paper. However, the Commissioner is hereby authorized to charge any other fees associated with the filing submitted herewith, or credit any overpayments to Deposit Account No. 07-1896 referencing the above-identified attorney docket number. A duplicate copy of this Transmittal sheet is enclosed.

Respectfully submitted,

Date: February 27, 2007



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